REMARKS

In the Office Action[1] mailed March 16, 2007, the Examiner rejected claims 1-7, 18, and 20 under 35 U.S.C. § 102(e) as being anticipated by Song et al. (U.S. Patent No. 7,058,873, hereafter "Song"), and rejected claims 8-17 and 19 under 35 U.S.C. § 103(a) as being unpatentable over Song in view of Richardson et al. (U.S. Patent No. 6,633,856, hereafter "Richardson").

Applicants amend claims 2, 3, and 5. Claims 1-20 remain pending with claims 1, 4, and 20 being independent.

Applicants respectfully traverse the rejection of claims 1-7, 18, and 20 under 35 U.S.C. § 102(e) as being anticipated by Song.

Claim 1 recites a decoding method for decoding LDPC codes, the LDPC codes being represented by an original check matrix, the method comprising, among other things, "an obtaining step of permuting at least two columns or two rows of the original check matrix to obtain a transformation check matrix," (emphasis added). Song fails to teach at least this obtaining step.

Specifically, Song, at column 5, lines 22-30, discloses,

> FIG. 4 depicts a sub-matrix M_i populated according to the process of FIG. 3A. As can be seen in FIG. 4, the sub-matrix is a 16x16 matrix. One's are placed along the identity line, i.e., one's are placed at coordinates [0,0], [1,1], [2,2], . . . [15,15]. Also, set s (to be described in more detail hereinbelow) dictates that the second 1 in column n=0 be positioned at coordinate [0, 9], and 1's are placed in the subsequent columns in a diagonally downward fashion, returning to the top row at column n=7.

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[1] The Office Action may contain statements characterizing the related art, case law, and claims. Regardless of whether any such statements are specifically identified herein, Applicants decline to automatically subscribe to any statements in the Office Action.

(Emphasis added). Accordingly, Song merely teaches a process for populating one's and zero's in a 16x16 matrix, so as to form the sub-matrix M_i. Therefore, Song does not disclose or suggest "permuting at least two columns or two rows of the original check matrix to obtain a transformation check matrix," as recited in claim 1.

In view of the above, Song fails to teach each and every element of independent claim 1. Independent claims 4 and 20, while of different scope than independent claim 1, distinguish Song for at least the same reasons as claim 1. Claims 1, 4, and 20 are allowable. Claims 2-3, 5-7, and 18 depend from one of claims 1 and 4 and are thus also allowable at least due to their dependence.

Applicants respectfully traverse the rejection of claims 8-17 and 19 under 35 U.S.C. § 103(a) as being unpatentable over Song in view of Richardson.

Claims 8-17 and 19 depend from claim 4 and thus include all the elements of claim 4. In rejecting claims 8-17 and 19, the Examiner cited Richardson as allegedly teaching various features recited in these claims. Even assuming the Examiner's characterization of Richardson is correct, Richardson still fails to teach or suggest the "obtaining means for permuting at least two columns or two rows of the original check matrix to obtain a transformation check matrix," as recited in claim 4 and required by claim 8-17 and 19. Accordingly, Song and Richardson, taken either alone or in combination, fail to teach or suggest each and every element recited in claim 4 and required by claim 8-17 and 19. Claim 8-17 and 19 are allowable.

In view of the foregoing amendments and remarks, all of claims 1-20 are in condition for allowance. Applicants respectfully request reconsideration of this application and the timely allowance of the pending claims.

Please grant any extensions of time required to enter this response and charge

any additional required fees to our deposit account 06-0916.

Respectfully submitted,

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Dated: June 13, 2007   By: _____ /Michael R. Kelly/ _____
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